

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/004617

International filing date (day/month/year)
17.02.2004

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC
E02D29/14, E01C23/088

Applicant
DAVIS, Richard B.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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10/26/04
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

107375993
International application No.
PCT/US2004/004617

JAP20 RECEIVED 18 APR 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/004617

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-11,13-16,19,20,23,25-28,31-34
	No: Claims	1,12,17,18,21,22,24,29,30
Inventive step (IS)	Yes: Claims	3-11,13-16,34
	No: Claims	1,2,12,17-33
Industrial applicability (IA)	Yes: Claims	1-34
	No: Claims	

2. Citations and explanations

see separate sheet

Re item V

1.1 EP-A-1182299 discloses with reference to figs.1,5

(a) a rotary bit for rubblizing the material around a utility access cover and ring (12,13) down to the (lower) flange of the ring by rotary grinding, comprising a cylindrical central core having an inside diameter that is larger than the outside diameter of the ring (12) and a carrier (3) having an attachment surface extending beyond the outside diameter of the central core with a plurality of rubblizing teeth (4) attached to and extending below the attachment surface, ie. an apparatus reading on claim 1 in the alternative of one carrier;

(b) a rotary bit for rubblizing the material below the (lower) flange of the ring of a manhole and down to below the top of the cone (14) of the manhole comprising a cylindrical central core having teeth (6) on a surface at the bottom (5) of the cylinder, the central core having an inside diameter that is greater than the outside (top) diameter of the cone, ie. an apparatus reading on claim 12;

(c) a method of setting manhole covers, the manhole having a cone (14), a ring (12) and a cover (13), comprising the steps of rubblizing the material around the ring and cover by a rotary grinder (2) and removing the rubblized material to form an excavated area around the ring, ie. a method reading on claim 17.

1.2 Independent claims 1,12,17 thus do not satisfy the criteria set forth in Article 33(2) PCT. The features introduced by dependent claim 18, 21,22,24,29,30 are anticipated without further preface by the same prior art.

2.1 The cited prior art further discloses a rotary bit having a cylindrical central core open at the bottom, an attachment carrier (3) extending beyond the outside diameter of the central core, and a plurality of teeth attached to the underside of the attachment carrier.

The contribution of claim 14 to said prior art consists in that the attachment carrier is a horizontal attachment plate extending a selected distance beyond the outside diameter of the central core.

2.2 Such a modification of the prior art is not derivable in an obvious manner from the state of the art rendered available, whereby independent claim 14, claims 15,16 appended thereon, dependent claims 3-11,13 and independent claim 34, which have corresponding limitations to an attachment plate, fulfill the criteria set forth in Articles 33(2),33(3) PCT.

3.1 The two-step method as in claim 32 would come within customary practice to the skilled person when using any rotary grinding bit, including the rotary bit known from the above cited document, cf. claim 32. Sucking out small pieces resulting of grinding eg. by means of the cited prior rotary bit is matter of common practice in earth drilling, cf. US-A-4911253. Hence none of independent claims 32,33 or of dependent claims 19,20,23 involves an inventive step, whereby these claims do not fulfill the criteria set forth in Article 33(3).

3.2 The features respectively introduced by dependent apparatus claim 2 and method claims 25-28,31 appear matter of design choice or procedural steps linked either to circumstances or to the inherent benefits thereof. Such features do not appear adapted to support an inventive step within the meaning of Article 33(3) PCT.